

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 90-019  
NPDES NO. CA0038261

WASTE DISCHARGE REQUIREMENTS FOR:

EAST BAY MUNICIPAL UTILITY DISTRICT  
SOBRANTE FILTER PLANT  
EL SOBRANTE, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. East Bay Municipal Utility District, hereinafter discharger, by application, dated June 15, 1989, has applied for renewal of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
2. The discharger treats and produces between an average of 20 million gallons per day (mgd). Treatment consists of aeration, chemical coagulation, sedimentation, filtration, disinfection and fluoridation. Chlorine, aluminum sulfate, cationic polymer, activated carbon, potassium permanganate, caustic soda and fluoride are added in the treatment process. The treatment generates wastewaters discharged by the following operating procedures:

- a. A 2.5 million gallon sedimentation basin is drained every four weeks. The supernatant is normally discharged to the washwater settling basins, then recycled with the incoming raw water. When problems occur, such as tastes and odors, the washwater settling basin supernatant is discharged through Outfall E-001 to San Pablo Creek.

Two filters per day are backwashed which generate a total of 600,000 gallons of backwash water per day. Normally, the backwash water is held in the washwater basin for settling and then recycled with the incoming raw water. When problems occur, such as tastes and odors, backwash supernatant from the washwater settling basin is also discharged through Outfall E-001 to San Pablo Creek.

- b. Sludge from the sedimentation basins and from the washwater basins is discharged to the sludge detention basins, concentrated and then discharged to the West Contra Costa Sanitary sewer system. The discharge rate is a maximum of 160 gallons per minute. If necessary, sludge is trucked to the District's SD-1 wastewater treatment plant.

During the last three years there have been no discharges from E-002. A third Outfall, E-003, was designed to receive overflow from E-002. Ozone treatment will be added in 1990. Concurrently, continuous solids removal equipment will be installed in the sedimentation basins to facilitate sludge removal.

3. Both outfalls are surface discharges to San Pablo Creek. Outfall E-001 is a 36 inch diameter concrete pipe (Latitude 37 deg., 57 min., 40.8 sec.; Longitude 122 deg., 16 min., 54.5 sec.). Outfall E-002 is a 6 inch diameter concrete pipe (Latitude 37 deg., 57 min., 44.8 sec.; Longitude 122 deg., 16 min., 52.4 sec.).
4. The discharge is presently governed by Waste Discharge Requirements, Order No. 85-4, which allow discharge into San Pablo Creek.
5. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for San Pablo Creek and contiguous waters.
6. The beneficial uses of San Pablo Creek and contiguous water bodies are:
  - a. Non-contact water recreation
  - b. Wildlife habitat
  - c. Warm fresh water habitat
  - d. Fish migration and spawning
7. The discharge to San Pablo Creek violates the Basin Plan's prohibitions against discharge of any wastewater which has characteristics of concern to beneficial uses into nontidal waters and at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1.
8. The discharge of wastewater in compliance with the requirements of this order qualifies for an exception to the Basin Plan prohibitions because an inordinate burden would be placed on the discharger relative to the beneficial uses protected. Also, an equivalent level of environmental protection will be achieved by the high quality of wastewater required by this Order for discharge.
9. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
10. The discharger and interested agencies and persons have been

notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT East Bay Municipal Utility District, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastewater through Outfall E-001 is prohibited except when problems such as tastes and odors occur.
2. Discharge of wastewater through Outfall E-002 is prohibited except in case of emergency.
3. No sludge shall be discharged into watercourses or waters of the State.
4. There shall be no bypass of untreated wastewater to waters of the State.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>30-day Average</u>	<u>Daily</u>	<u>Instantaneous Maximum</u>
a. Total Suspended Solids	mg/l	15	30	--
b. Settleable Matter	ml/l-hr	0.1	0.2	--
c. Total Chlorine residual (1)	mg/l	--	--	0.0
d. Aluminum Dissolved	mg/l	--	--	0.75

(1) Requirement defined as below limit of detection in standard test methods.

2. Waste shall not have a pH of less than 6.5 nor greater than 8.5, unless the raw influent water being filtered has a pH greater than 8.5, in which case the waste shall not have a pH greater than that of the influent water.
3. In any representative set of samples, the waste as

discharged shall meet the following limit of quality:

TOXICITY: The survival of test fishes in 96 hour bioassays of the effluent discharged shall be a median of 90 % survival and a 90 percentile value of not less than 70 % survival.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any point.
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Increased turbidity above background levels by more than the following:

<u>Receiving Water Background</u>	<u>Incremental Increase</u>
<50 units (NTU)	5 units, maximum
50 - 100 units	10 units, maximum
>100 units	10 % of background, maximum

- e. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - f. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of this unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
  - a. Dissolved Oxygen 5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80 % saturation. When natural factors cause lesser concentration(s) than those

specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

- b. Dissolved Sulfide      0.1 mg/l maximum
  - c. pH                      Variation from natural ambient pH by more than 0.5 pH units.
  - d. Un-ionized  
    Ammonia                      0.025 mg/l as N Annual Median;  
                                    0.4 mg/l as N Maximum.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

- 1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 85-4 adopted on January 16, 1985. Order No. 85-4 is hereby rescinded.
- 2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:  
  
Mass Emission Limit in lbs/day = Concentration Limit in mg/l x 8.34 x Actual Flow in mgd averaged over the time interval to which the limit applies.
- 3. The discharger shall comply with all sections of this Order upon adoption.
- 4. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
- 5. The discharger shall review and update by December 31, annually, its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willfull and

negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.
7. This Order expires February 21, 1995. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as applicable for issuance of new waste discharge requirements.
8. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Board, San Francisco Bay Region on February 21, 1990.



STEVEN R. RITCHIE  
Executive Officer

Attachments:

Standard Provisions & Reporting  
Requirements, December 1986  
Self-Monitoring Program  
Resolution 74-10

[File No. 2119.1071A]  
[Originator/MJR]  
[Reviewer/RJC]

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR

EAST BAY MUNICIPAL UTILITY DISTRICT

SOBRANTE FILTER PLANT

EL SOBRANTE, CONTRA COSTA COUNTY

NPDES NO. CA0038261

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H. MONITORING SPECIFICATIONS

1. Description of Sampling Stations

- |    |                                 |  |
|----|---------------------------------|--|
| a. | <u>Intake Station</u>           | <u>Description</u>   |
|    | I-1                             | At any point in the raw water supply prior to any treatment.   |
| b. | <u>Effluent Station</u>         | <u>Description</u>   |
|    | E-001                           | At any point in the Outfall Pipe E-001.  |
|    | E-002                           | At any point in the Outfall Pipe E-002.  |
| c. | <u>Receiving Waters Station</u> | <u>Description</u>   |
|    | C-1                             | At a point in San Pablo Creek, located approximately 100 feet upstream from Outfall E-001 point of discharge.  |
|    | C-2                             | At a point in San Pablo Creek, located approximately 25 feet downstream from Outfall E-001 point of discharge. |
|    | C-3                             | At a point in San Pablo Creek, located approximately 100 feet upstream from Outfall E-002 point of discharge.  |
|    | C-4                             | At a point in San Pablo Creek, located approximately 25 feet downstream from Outfall E-002 point of discharge. |

2. Schedule of Sampling and Analysis


- a. The schedule of sampling and analysis shall be that given as Table I.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-019.



2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.



STEVEN R. RITCHIE

Executive Officer

Effective Date 2/21/90

Attachments:  
Table 1

TABLE I  
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

NPDES # CA0038261

ORDER NO. 90-019

SAMPLING STATIONS	E-001		E-002		C-1 thru C-4		I		
TYPE OF SAMPLES	C-24	G	C-24	G	G	O	G		
Flow Rate (mgd)		(1) D		(1) D					
Settleable Matter (ml/l-hr)		D		D					
Total Suspended Solids (mg/l & lbs/day)		D		D					
Aluminum dissolved (mg/l & lbs/day)		Y		Y					
Chlorine Residual (mg/l)		D		D					
pH (units)		D		D	D		D		
Fish Toxicity, 96-hour % Survival in undiluted waste		Y		Y					
Turbidity (Nephelometric Turbidity Units)		D			D				
All Applicable Standard Observations						D			

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample  
C-24 = composite sample - 24-hour  
O = observation

TYPES OF STATIONS

I = intake and/or water  
supply stations  
E = waste effluent stations  
C = receiving water stations

FREQUENCY OF SAMPLING

Y = yearly, during the first calendar quarter  
W = weekly  
M = monthly  
D = daily when there is a discharge.

(1) An estimate is acceptable. Basis of calculation shall be stated.